

WHAT IS CLAIMED IS:

1. A light source device having a light source unit housing and a light source unit including an electric lamp for supplying illumination light to an endoscope system, the electric lamp being electrically connected to a power source when the light source unit is inserted into the light source unit housing and disconnected from the power source when the light source unit is removed from the light source unit housing, the light source device comprising:

a pair of first power electrodes held for sliding movement in opposite directions for insertion and removal of the light source unit by the light source unit housing through which electric power is transmitted;

a pair of second power electrodes fixedly attached to the light source unit through which electric power is supplied to the electric lamp; and

biasing means incorporated in the light source unit housing for biasing the first power electrodes in the direction for removal;

wherein, when the light source unit is inserted into the light source unit housing, the second power electrodes come to contact with and thrust back the first power electrodes against the biasing means, thereby electrically connecting the electric lamp to the power source.

2. A light source device as defined in claim 1, wherein the light source unit comprises a pair of heat sinks for radiating heat of the electric lamp which are

arranged side by side with electric separation from each other so as to serve as a socket for receiving the electric lamp therein, each of the heat sinks having a plurality of radial fins one of which forms the second power electrode.

3. A light source device as defined in claim 2, wherein the light source unit comprises a lamp mount to which the heat sinks are fixedly mounted, the lamp mount being made of a material that is electrically nonconductive and low in thermal conductivity.

4. A light source device as defined in claim 1, and further comprising an outer case with an access opening to the light source unit inserted in the light source unit housing, a door for opening and closing the access opening and safety means fixedly attached to an inner side of the door for preventing the door from closing the access opening when the light source unit is in a false position in the light source unit housing.

5. A light source device as defined in claim 4, wherein the safety means comprises a pin that is brought into a strike on the light source unit when the light source unit is in a false position in the light source unit housing.

6. A light source device as defined in claim 4, and further comprising interlock release means fixedly attached to the inner side of the door, wherein the

interlock release means electrically interlocks the power source and the electric lamp when the door is closed and releases electric interlock between the power source and the electric lamp when the door is opened.

7. A light source device having a light source unit housing and a light source unit including an electric lamp for supplying illumination light to an endoscope system, the electric lamp being electrically connected to a power source when the light source unit is inserted into the light source unit housing and disconnected from the power source when the light source unit is removed from the light source unit housing, the light source device comprising:

socket means fixedly incorporated in the light source unit for receiving the electric lamp;

a discharge circuit incorporated in the light source unit housing that operates to discharge electric charges built up in an object when electrically connected to the charge built-up object;

sliding discharge electrodes forming part of the discharge circuit and held for slide movement in opposite directions for insertion and removal of the light source unit by the light source unit housing; and

biasing means for biasing the sliding discharge electrodes in the direction for removal of the light source unit so as thereby to keep the sliding discharge electrodes connected to the discharge circuit;

wherein the light source unit forces the sliding discharge electrodes

against the biasing means through engagement between the socket means and the sliding discharge electrodes so as to electrically disconnect the sliding discharge electrodes from the discharge circuit following movement of the light source unit in the direction for insertion into the light source unit housing and allows the sliding discharge electrodes to slide keeping in contact with the socket means and to be brought into electric connection with the discharge circuit following movement of the light source unit in the direction for removal from the light source unit housing so as thereby to electrically connect the socket means as the charge built-up object with the discharge circuit.

8. A light source device as defined in claim 7, wherein the socket comprises a pair of heat sinks for radiating heat of the electric lamp which are arranged side by side with electric separation from each other, each of the heat sinks having a socket bore for receiving the electric lamp therein and a plurality of radial fins one of which is engageable with the sliding discharge electrode.

9. A light source device as defined in claim 8, and further comprising a lamp mount for fixedly mounting the heat sinks thereto, wherein the lamp mount is made of a material that is electrically nonconductive and low in thermal conductivity.

10. A light source device as defined in claim 7, and further comprising

an outer case with an access opening to the light source unit inserted in the light source unit housing, a door for opening and closing the access opening and safety means fixedly attached to an inner side of the door, wherein the safety means is brought into a strike on the light source unit so as thereby to prevent the door from closing the access opening when the light source unit is in a false position in the light source unit housing.

11. A light source device as defined in claim 10, wherein the safety means comprises a pin that is brought into a strike on the light source unit when the light source unit is in a false position in the light source unit housing.

12. A light source device as defined in claim 10, and further comprising interlock release means fixedly attached to the inner side of the door, wherein the interlock means electrically interlocks the power source and the electric lamp when the door is closed and releases electric interlock between the power source and the electric lamp when the door is opened.

13. A light source device having a light source unit housing and a light source unit including an electric lamp for supplying illumination light to an endoscope system, the light source unit is removably inserted into the light source unit housing, the light source unit comprising:

grip means for being gripped by an operator;

heat sink means for holding the heat sink means and radiating heat of the electric lamp; and

insulating means disposed between the grip means and the heat sink means for thermally and electrically insulating the grip means from the heat sink means, the insulating means being made of a material that is electrically nonconductive and low in thermal conductivity.

14. A light source device having a light source unit housing and a light source unit including an electric lamp for supplying illumination light to an endoscope system, the light source unit is removably inserted into the light source unit housing, the light source device comprising:

an outer casing with an access opening to the light source unit inserted in the light source unit housing;

a door for opening and closing the access opening; and

safety means fixedly attached to an inner side of the door for preventing the door from closing the access opening when the light source unit is in a false position in the light source unit housing.